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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,113

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BRI/017

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EXAMINER

CHANKONG, DOHM

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,113	Applicant(s) TEOWEE ET AL.	
	Examiner DOHM CHANKONG	Art Unit 2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-13,15-22 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5-12 and 29 is/are allowed.
- 6) ☒ Claim(s) 13, 15-22, 30, and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's request for continued examination. Claims 1, 13, 15, 17, and 22 are amended. Claims 14 and 23-28 are canceled. Accordingly, claims 1, 3, 5-13, 15-22, and 29-31 are presented for further examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/6/2009 has been entered.

Allowable Subject Matter

3. Claims 1, 3, 5-12, and 29 are allowed.
4. After careful consideration, the examiner has withdrawn the indicated allowability of claims 13, 15-22, 30, and 31 because independent claims 13 and 17 do not properly claim the data structure. These claims were initially indicated as allowable if amended to include the limitations of claims 24 and 27 for claim 13 and claims 25 and 28 for claim 17. These limitations were indicated as allowable because of they described a packet with a unique and inventive data structure.

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The problem is that these machine claims do not actually claim the data structure as part of the machine. Claim scope is not limited by claim language that does not limit a claim to a particular structure. *MPEP* § 2111.04. Therefore, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *MPEP* § 2114. Here, claims 13 and 17 are claims to a machine. With the way claims 13 and 17 are written, the claimed data packet with its unique structure does not actually affect the claimed machines. Therefore, the limitations directed to the claimed data packet do not affect the claims' scope.

Claim 13 recites "[a] device *capable* of receiving data." This wording does not mean that the device actually receives the data; logically, any computer would be capable of receiving the data. Similarly, claim 17 recites means for transmitting the data. Again, any device would contain the means for sending the data. If allowed, these claims could be interpreted to read on any general computer.

The novelty of Applicant's invention lies in the unique data structure. Thus, the devices in claims 13 and 17 need to be amended such that the data structure is an actual part of the device and somehow changes the device from a general computer to a specific computer, i.e., the computer's structure is affected by the claimed data structure. For example, if amended to include a computer storage device that stores the data structure after it is received, the computer is transformed from a general computer to a specific computer containing the inventive data structure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Flynn, U.S. Patent No. 6,198,785.

6. As to claim 13, Flynn discloses a device capable of receiving data at a frequency that is continuously-variable [*column 3 «lines 22-31»*: a variable baud rate generate implies that the frequency may be continuously variable] and is not selected *a priori* [*column 1 «lines 20-22 and 53-58»*: discussing the problem to be solved – that the user has to know the baud rate - and the feature of automatic detection of an incoming baud rate], said data including synchronization bits and bits conveying outer information [*column 4 «line 57» to column 5 «line 6»*: where the start bit of the data enables the device to automatically detect and adjust incoming baud rate from a terminal], said device including electronic circuitry that includes means for ascertaining transmission frequency by sampling the bit width of at least some synchronization bits [*column 6 «lines 46-58»*] and means for receiving subsequently transmitted bits at the ascertained transmission frequency [*column 3 «lines 3-6»*: rest of the characters are then received at the actual baud rate]; and

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wherein said data comprises a packet including two or more words each containing synchronization bits, and wherein said means for ascertaining transmission frequency samples the bit width of at least some synchronization bits of multiple words of said packet, and wherein said sampled multiple words are separated by one or more words containing bits conveying other information, and wherein said data comprises a packet that includes two or more words each containing an initial non-alternating portion followed by a series of alternating synchronization bits [*this limitation not given patentable weight because it does not limit the claim's scope. See para. 3 above*].

7. As to claim 30, Flynn does disclose utilizing an asynchronous serial communications interface [*column 3 «lines 65-66»*]. The use of an asynchronous serial interface clearly implies that the transmitting and receiving steps are performed asynchronously.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 15, 17-19, and 31 are rejected under 35 U.S.C §103(a) as being unpatentable over Flynn, in further view of Laturell et al, U.S Patent No. 6,404,780 [“Laturell”].

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9. As to claim 17, Flynn discloses all the limitations as claimed (see the rejection of claim 1) including the steps of:

establishing a system having encountered transmission conditions limiting the rate of transmission on said system, which conditions are not precisely known in advance of establishing said system but are encountered after establishment of the system, wherein said steps of transmitting and receiving are performed over said system [*column 2 «line 61» to column 3 «line 6»*];

if said transmission frequency exceeds said possible transmission frequency under said encountered transmission conditions, altering said transmission frequency so as to equal a rate that is within said possible transmission frequency under said encountered transmission conditions [*column 3 «lines 1-3»*];

said step of transmitting is performed by a master device [*column 2 «lines 57-58»* where : Flynn's data communication terminal is a master device] and said step of receiving is performed by a slave device [abstract : where Flynn's communication receivers are slave devices]; and

wherein said data comprises a packet including two or more words each containing synchronization bits, and wherein said means for ascertaining transmission frequency samples the bit width of at least some synchronization bits of multiple words of said packet, and wherein said sampled multiple words are separated by one or more words containing bits conveying other information, and wherein said data comprises a packet that includes two or more words each containing an initial non-alternating portion followed by a series of alternating synchronization

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bits [*this limitation not given patentable weight because it does not limit the claim's scope. See para. 3 above*].

Flynn does not expressly disclose a bus. Like Flynn, Laturell discloses a method for establishing a system for transferring data [abstract]. Laturell discloses synchronizing slave devices over a serial data bus using control words [abstract | column 3 «lines 43-46»]. It would have been obvious to one of ordinary skill in the art to incorporate Laturell's teaching of a serial bus to synchronize devices into Flynn's system. One would have been motivated to modify Flynn because adding a serial bus between Flynn system would have been an obvious improvement because Flynn already discloses serial communications in his system [*column 2 «lines 11-13»: any serial data communication device*].

10. As to claims 15 and 19, Flynn discloses the step of transmitting other data back from said slave device to said master device at a transmission frequency determined in step b) (of claim 1) [*column 3 «lines 22-24»: BRG responsible for setting the receive and transmit baud rates and are they are set to the same rate during Flynn's detection process*].

11. As to claim 17, it is merely a system that implements the steps of the method of claims 1, 3, and 6. Therefore, claim 17 are rejected for at least the same reasons set forth for claims 1, 3, and 6.

12. As to claim 18, it is merely a system that implements the steps of the method of claim 3. Therefore, claim 18 are rejected for at least the same reasons set forth for claim 3.

13. As to claim 31, Flynn does disclose utilizing an asynchronous serial communications interface [*column 3 «lines 65-66»*]. The use of an asynchronous serial interface clearly implies that the transmitting and receiving steps are performed asynchronously.

14. Claims 16 and 20 are rejected under 35 U.S.C §103(a) as being unpatentable over Flynn and Laturell, in further view of Hallin et al, U.S Patent Publication No. 2003|0136289 [“Hallin”].

15. As to claims 16 and 20, Flynn as modified by Laturell does not expressly disclose a detonator or a blasting machine. Hallin discloses an electronic detonator system for synchronizing communications between a detonator (slave) and a blasting machine (master) [abstract | 0011-0015]. It would have been obvious to one of ordinary skill in the art to modify Flynn’s system to include Hallin’s slave detonators and master blasting machines. One would have been motivated to perform such a modification to enhance the functionality of Flynn’s synchronization system by increasing the number of devices with which Kuznicki would be compatible. There is a reasonable expectation of success because Hallin discloses utilizing digital data packets over a bus between the detonators and the blasting machine [0014, 0021] which is analogous to Flynn and Laturell’s system.

16. Claims 21 and 22 are rejected under 35 U.S.C §103(a) as being unpatentable over Flynn and Laturell, in further view of Rubbmark et al, U.S Patent No. 6.012.105 [“Rubbmark”].

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17. As to claims 21, and 22, Flynn as modified by Laturell does not disclose a 2-line serial bus for communicating between the devices. Rubbmark discloses a 2-line serial bus that enables for synchronization between a master and slave device [column 5 «lines 33-36 and 43-47»]. It would have been obvious to one of ordinary skill in the art to incorporate Rubbmark's teaching of a 2-line serial bus interface into Flynn's data transfer system. The 2-line serial bus interface is well known in the art and provides useful benefits for transferring operating parameters between advanced electronic devices [see Rubbmark, column 2 «lines 16-20»]. One would therefore have been motivated to incorporate the 2-line serial bus into Flynn's system in order to be able to transfer complex operating parameters between master and slave devices and especially given Flynn's use of serial communication devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571.272.3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm Chankong/
Primary Examiner, Art Unit 2452